

Claims

What is claimed is:

1. A method of operating a message server:

a) sending a first portable document file to a client system, the first portable document file comprising data content selectable by the user;

b) receiving a message, the message comprising both:

identification of the first portable document file; and

identification of the displayed data content selected by the user;

c) using the identification of the first portable document file and the identification of the displayed data content selected by the user to build an instruction message instructing the client system to at least one of obtain a document at a specified network address and post data to a specified network address; and

d) providing the instruction message to the client system.

2. The method of operating a message server of claim 1, wherein the step of using the identification of the first portable document file and the identification of the displayed content selected by the user to build an instruction message comprises:

i) utilizing work flow tables to map the identification of the first portable document file and the identification of the displayed data content selected by the user to identification of one of a plurality of objects, each for building a different type of instruction message;

ii) retrieving variables needs for calling the one of the plurality of object for building the instruction message; and

iii) making a processing call to the object.

3. The method of operating a message server of claim 1:

wherein the message further comprises identification of the user of the client system;

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the step of using the identification of the first portable document file and the identification of the displayed data content selected by the user to build an instruction message further comprises using the identification of the user of the client system to determine whether the user has permissions to data processing systems at the specified network address; and

the step of providing the instruction message to the client system comprises only providing the instruction message to the client system if the user of the client system has permissions to access the second portable document file.

4. The method of operating a message server of claim 3, wherein the step of using the identification of the first portable document file and the identification of the displayed content selected by the user to build an instruction message comprises:

i) utilizing work flow tables to map the identification of the first portable document file and the identification of the displayed data content selected by the user to identification of one of a plurality of objects, each for building a different type of instruction message;

ii) retrieving variables needs for calling the one of the plurality of object for building the instruction message; and

iii) making a processing call to the object.

5. The method of operating a message server of claim 4, wherein the step of providing instruction message to the client system only if the user of the client system has permissions to access the second portable document file comprises:

utilizing the work flow tables to map the identification of the user of the client system to an access level;

comparing the access level to a required access level; and

providing the instruction message to the client system only if the access level is greater than or equal to the required access level.

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6. The method of operating a message server of claim 1, further comprising sending a message server address to the client system as a message server address update message that is a file distinct from the first portable document file, the message server address being an address at which the message is received.

7. The method of operating a message server of claim 6, wherein the step of using the identification of the first portable document file and the identification of the displayed content selected by the user to build an instruction message comprises:

i) utilizing work flow tables to map the identification of the first portable document file and the identification of the displayed data content selected by the user to identification of one of a plurality of objects, each for building a different type of instruction message;

ii) retrieving variables needs for calling the one of the plurality of object for building the instruction message; and

iii) making a processing call to the object.

8. The method of operating a message server of claim 6:

wherein the message further comprises identification of the user of the client system;

the step of using the identification of the first portable document file and the identification of the displayed data content selected by the user to build an instruction message further comprises using the identification of the user of the client system to determine whether the user has permissions to data processing systems at the specified network address; and

the step of providing the instruction message to the client system comprises only providing the instruction message to the client system if the user of the client system has permissions to access the second portable document file.

9. The method of operating a message server of claim 8, wherein the step of using

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the identification of the first portable document file and the identification of the displayed content selected by the user to build an instruction message comprises:

i) utilizing work flow tables to map the identification of the first portable document file and the identification of the displayed data content selected by the user to identification of one of a plurality of objects, each for building a different type of instruction message;

ii) retrieving variables needs for calling the one of the plurality of object for building the instruction message; and

iii) making a processing call to the object.

10. The method of operating a message server of claim 9, wherein the step of providing instruction message to the client system only if the user of the client system has permissions to access the second portable document file comprises:

utilizing the work flow tables to map the identification of the user of the client system to an access level;

comparing the access level to a required access level; and

providing the instruction message to the client system only if the access level is greater than or equal to the required access level.

11. A message server for dynamically managing the relationship between portable document file content and related data processing systems, the message system comprising:

a) a web server module:

i) providing a first portable document file to a client system, the first portable document file comprising data content selectable by the user;

ii) receiving a message from the client system, the message comprising both:

identification of the first portable document file; and

identification of the displayed data content selected by the user;

11 iii) providing an instruction message to the client system, the
12 instruction message instructing the client system to at least one of obtain a document at
13 a specified network address and post data to a specified network address; and

14 c) a work flow module using the identification of the first portable document
15 file and the identification of the displayed data content selected by the user to select an
16 instruction for inclusion in the instruction message and to select the specified network
17 address.

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1 12. The message server of claim 11, wherein the work flow module comprises work
2 flow tables, the work flow module:

3 i) utilizing the work flow tables to map the identification of the first portable
4 document file and the identification of the displayed data content selected by the user
5 to identification of one of a plurality of objects, each object for building a different type
6 of instruction message;

7 ii) retrieving variables needed for calling the one of the plurality of objects for
8 building the instruction message; and

9 iii) making a processing call to the object.

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1 13. The message server of claim 11 wherein:

2 the message further comprises identification of the user of the client system;

3 the work flow module further uses the identification of the user of the client
4 system to determine whether the user has permissions to access the data processing
5 services available at the specified network address; and

6 providing the instruction message to the client system occurs only if the user of
7 the client system has permissions to access the data processing services available at
8 the specified network address.

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1 14. The message server of claim 13, wherein the work flow module comprises work
2 flow tables, the work flow module:

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i) utilizing the work flow tables to map the identification of the first portable document file and the identification of the displayed data content selected by the user to identification of one of a plurality of objects, each object for building a different type of instruction message;

ii) retrieving variables needed for calling the one of the plurality of objects for building the instruction message; and

iii) making a processing call to the object.

15. The message server of claim 14, wherein the work flow module further utilizes the work flow tables to:

map the identification of the user of the client system to an access level;

compare the access level to a required access level; and

provide the instruction message to the client system only if the access level is greater than or equal to the required access level.

16. The message server of claim 11, wherein the message server further sends a message server address to the client system as a message server address update message that is a file distinct from the first portable document file, the message server address being an address at which the message is received.

17. The message server of claim 16, wherein the work flow module comprises work flow tables, the work flow module:

i) utilizing the work flow tables to map the identification of the first portable document file and the identification of the displayed data content selected by the user to identification of one of a plurality of objects, each object for building a different type of instruction message;

ii) retrieving variables needed for calling the one of the plurality of objects for building the instruction message; and

iii) making a processing call to the object.

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1 18. The message server of claim 16 wherein:

2 the message further comprises identification of the user of the client system;
3 the work flow module further uses the identification of the user of the client
4 system to determine whether the user has permissions to access the data processing
5 services available at the specified network address; and
6 providing the instruction message to the client system occurs only if the user of
7 the client system has permissions to access the data processing services available at
8 the specified network address.

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1 19. The message server of claim 18, wherein the work flow module comprises work
2 flow tables, the work flow module:

3 i) utilizing the work flow tables to map the identification of the first portable
4 document file and the identification of the displayed data content selected by the user
5 to identification of one of a plurality of objects, each object for building a different type
6 of instruction message;

7 ii) retrieving variables needed for calling the one of the plurality of objects for
8 building the instruction message; and

9 iii) making a processing call to the object.

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1 20. The message server of claim 19, wherein the work flow module further utilizes
2 the work flow tables to:

3 map the identification of the user of the client system to an access level;

4 compare the access level to a required access level; and

5 provide the instruction message to the client system only if the access level is
6 greater than or equal to the required access level.